WHAT IS CLAIMED IS:

1. An objective lens drive apparatus for use in an optical pickup, comprising:

a magnetic circuit including a magnet magnetized in two polarities; and

a coil unit including a focus coil, a tracking coil and a tilt coil,

wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of the magnetic circuit.

2. An objective lens drive apparatus according to claim 1, wherein the magnetic circuit includes a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnets.

3. An objective lens drive apparatus according to claim 1, wherein the coil unit includes a plurality of printed circuit boards, and the focus coil, the tracking coil and the tilt coil are separately mounted on the printed circuit boards.

4. An objective lens drive apparatus according to claim 1, wherein the coil unit includes a plurality of first printed circuit boards and second printed boards, and the focus coil and the tracking coil are mounted on the first printed circuit

board and the tilt coil is mounted on the second printed board.

5. An objective lens drive apparatus according to claim 1, wherein the coil unit includes a plurality of first printed circuit boards and second printed boards, and the focus coil and the tilt coil are mounted on the first printed circuit board and the tracking coil is mounted on the second printed board.

6. An objective lens drive apparatus according to claim 1, wherein the number of the focus coil is one, the number of the tracking coil is even and the number of the tilt coil is two, and wherein the magnet is magnetized in two polarities in a focus direction.

7. An objective lens drive apparatus according to claim 1, wherein the number of the focus coil is even, the number of the tracking coil is one and the number of the tilt coil is two, and wherein the magnet is magnetized in two polarities in a tracking direction.

8. An objective lens drive apparatus for use in an optical pickup, comprising:

two magnetic circuits each including a magnet magnetized in two polarities; and

a coil unit including a focus coil, a tracking coil and a tilt coil,

wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of the magnetic circuit.

9. An objective lens drive apparatus according to claim 8, wherein the magnetic circuit includes a plurality of the magnet, and the coil unit is disposed within the magnetic gap.

10. An objective lens drive apparatus according to claim 8, wherein the coil unit includes a plurality of printed circuit boards, and the focus coil, the tracking coil and the tilt coil are separately mounted on the printed circuit boards.

11. An objective lens drive apparatus according to claim 8, wherein the coil unit includes a plurality of first printed circuit boards and second printed boards, and the focus coil and the tracking coil are mounted on the first printed circuit board and the tilt coil is mounted on the second printed board.

12. An objective lens drive apparatus according to claim 8, wherein the coil unit includes a plurality of first printed circuit boards and second printed boards, and the focus coil and the tilt coil are mounted on the first printed circuit board and the tracking coil is mounted on the second printed

board.

13. An objective lens drive apparatus according to claim 8, wherein the coil unit is fixed to the two side surfaces of a lens holder extending in parallel with a tracking direction.

14. An objective lens drive apparatus according to 8, wherein the number of the focus coil is one, the number of the tracking coil is even and the number of the tilt coil is two, and also wherein the magnet is magnetized in two polarities in a focus direction.

15. An objective lens drive apparatus according to claim 8, wherein the number of the focus coil is even, the number of the tracking coil is one and the number of the tilt coil is two, and also wherein the magnet is magnetized in two polarities in the focus direction.

16. An objective lens drive apparatus according to claim 8, wherein the focus coil is wound on the side surface of a lens holder, and the tracking coil and the tilt coil are respectively mounted on the two side surfaces extending in parallel with the tracking direction

17. An objective lens drive apparatus according to claim

16, wherein the numbers of the tracking coils and tilt coils mounted on one the surface of the lens holder are respectively two.

18. An objective lens drive apparatus according to claim 16, wherein the tracking coil and the tilt coil are both superimposed on the focus coils.

19. An objective lens drive apparatus according to claim 16, wherein the tracking coils and the tilt coils are both wound around coil winding frames provided on and projected from the side surfaces of the lens holder.

20. An objective lens drive apparatus according to claim 16, wherein the tracking coils are wound around coil winding frames provided on and projected from the side surfaces of the lens holder and the tilt coils are superimposed on the focus coils.

21. An objective lens drive apparatus according to claim 16, wherein the tracking coils are superimposed on the focus coils and the tilt coils are wound around coil winding frames provided on and projected from the side surfaces of the lens holder.

22. An objective lens drive apparatus used in an optical pickup for detecting the inclination of an optical disk to adjust the inclination of an objective lens in accordance with an inclination signal of the optical disk, comprising:

a magnetic circuit including a magnet magnetized in two polarities; and

a coil unit including a focus coil, a tracking coil and a tilt coil,

wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of the magnetic circuit,

wherein a focus servo is executed by supplying currents respectively to a plurality of the focus coils due to the sum of drive forces generated in the plurality of focus coils,

wherein the inclination adjustment of the objective lens is executed by generating moment around the center of gravity of a movable part due to the difference between the drive forces.

23. An objective lens drive apparatus according to claim 22, wherein the magnetic circuit includes a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnets.

24. An objective lens drive apparatus according to claim 22, wherein the coil unit includes a plurality of printed circuit boards, and the focus coil and the tracking coil are separately

mounted on the printed circuit boards.

25. An objective lens drive apparatus according to claim 22, wherein the coil unit includes a plurality of a printed circuit boards, and the focus coil and the tracking coil are mounted on the printed circuit board.

26. An objective lens drive apparatus according to 22, wherein the number of the focus coil is even and the number of the tracking coil is one, and the magnet is magnetized in two polarities in a tracking direction.

27. An objective lens drive apparatus used in an optical pickup for detecting the inclination of an optical disk to adjust the inclination of an objective lens in accordance with an inclination signal of the optical disk, comprising:

a magnetic circuit including a magnet magnetized in two polarities; and

a coil unit including a focus coil, a tracking coil and a tilt coil,

wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of the magnetic circuit,

wherein a tracking servo is executed by supplying currents respectively to a plurality of the tracking coils due to the sum of drive forces generated in the plurality of focus coils,

wherein the inclination adjustment of the objective lens is executed by generating moment around the center of gravity of a movable part due to the difference between the drive forces.

28. An objective lens drive apparatus according to claim 27, wherein the magnetic circuit includes a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnet gaps.

29. An objective lens drive apparatus according to claim 27, wherein the coil unit includes a plurality of printed circuit boards, and the focus coil and the tracking coil are separately mounted on the printed circuit boards.

30. An objective lens drive apparatus according to claim 27, wherein the coil unit includes a plurality of a printed circuit board, and the focus coil and the tracking coil are mounted on the printed circuit board.

31. An objective lens drive apparatus according to claim 27, wherein the number of the focus coil is one and the number of the tracking coil is even, and the magnet is magnetized in two polarities in a focus direction.

32. An objective lens drive apparatus used in an optical

pickup for detecting the inclination of an optical disk to adjust the inclination of an objective lens in accordance with an inclination signal of the optical disk, comprising:

two magnetic circuits respectively including a magnet magnetized in two polarities; and

a coil unit including a focus coil, a tracking coil and a tilt coil,

wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of the magnetic circuit,

wherein a focus servo is executed by supplying currents respectively to a plurality of the focus coils due to the sum of drive forces generated in the plurality of focus coils,

wherein the inclination adjustment of the objective lens is executed by generating moment around the center of gravity of a movable part due to the difference between the drive forces.

33. An objective lens drive apparatus according to claim 32, wherein the magnetic circuit includes a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnets.

34. An objective lens drive apparatus according to claim 32, wherein the coil unit includes a plurality of printed circuit boards, and the focus coil and the tracking coil are separately mounted on the printed circuit boards.

35. An objective lens drive apparatus according to claim 32, wherein the coil unit includes a plurality of a printed circuit boards, and the focus coil and the tracking coil are mounted on the printed circuit board.

36. An objective lens drive apparatus according to 32, wherein the number of the focus coil is even and the number of the tracking coil is one, and the magnet is magnetized in two polarities in a tracking direction.

37. An objective lens drive apparatus used in an optical pickup for detecting the inclination of an optical disk to adjust the inclination of an objective lens in accordance with an inclination signal of the optical disk, comprising:

two magnetic circuits respectively including a magnet magnetized in two polarities; and

a coil unit including a focus coil, a tracking coil and a tilt coil,

wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of the magnetic circuit,

wherein a tracking servo is executed by supplying currents respectively to a plurality of the tracking coils due to the sum of drive forces generated in the plurality of focus coils,

wherein the inclination adjustment of the objective lens

is executed by generating moment around the center of gravity of a movable part due to the difference between the drive forces.

38. An objective lens drive apparatus according to claim 37, wherein the magnetic circuit includes a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnet gaps.

39. An objective lens drive apparatus according to claim 37, wherein the coil unit includes a plurality of printed circuit boards, and the focus coil and the tracking coil are separately mounted on the printed circuit boards.

40. An objective lens drive apparatus according to claim 37, wherein the coil unit includes a plurality of a printed circuit board, and the focus coil and the tracking coil are mounted on the printed circuit board.

41. An objective lens drive apparatus according to claim 37, wherein the number of the focus coil is one and the number of the tracking coil is even, and the magnet is magnetized in two polarities in a focus direction.